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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,981	02/25/2004	Giancarlo Traversa	38741/GM/lp	8968

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EXAMINER

WU, IVES J

ART UNIT	PAPER NUMBER
1724	

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/784,981	<b>Applicant(s)</b> TRAVERSA ET AL.	
	<b>Examiner</b> Ives Wu	<b>Art Unit</b> 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

- (1). Applicants' Amendments and Remarks filed on September 22, 2006 have been received. Claims 18-20 are newly added. Claims 16-17 are cancelled.

The rejections of claims 16-17 in prior Office Action dated May 22, 2006 is removed in response to the cancellation in applicants' Amendments filed on September 22, 2006.

The 102 rejection for claims 1-5, 9-11, 15-17 in the prior Office Action dated May 22, 2006 based on prior art references – Harke et al (US005710204A) is withdrawn in response to the Remarks filed on September 22, 2006.

The 103 rejection for claims 6-7, 12, 14 in the prior Office Action dated May 22, 2006 based on prior art references – Harke et al (US005710204A) is withdrawn in response to the Remarks filed on September 22, 2006.

The 103 rejection for claim 8 in the prior Office Action dated May 22, 2006 based on prior art references – Harke et al (US005710204A), Abe et al (US004334933) is withdrawn in response to the Remarks filed on September 22, 2006.

The 103 rejection for claim 13 in the prior Office Action dated May 22, 2006 based on prior art references – Harke et al (US005710204A), Abe et al (US004334933), Traversa et al (US20010041234A1) is withdrawn in response to the Remarks filed on September 22, 2006.

The rejection for claims 1-15 in the prior Office Action dated May 22, 2006 based on prior art references – Schock (US005218013), Harke et al (US005710204A), Traversa et al (US20010041234A1) is sustained and presented together with the rejections for claims 18-20 in the following paragraphs.

### *Claim Rejections - 35 USC § 103*

- (2). The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

- (3). **Claims 1-12, 14-15, 18 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schock (US005218013A) in view of Harke et al (US005710204A).

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(4). The same rationale of rejection for **Claims 1-12, 14-15** has been recited in the prior Office Action dated May 22, 2006.

As to limitation of **claim 18**, the disclosure of Schock, Harke et al is incorporated herein by reference, the most subject matters of thermosetting composite material, filler material of glass particles having a size distribution from 0.2 to 1.5 mm being coated with organofunctional silane as currently claimed, have been recited in applicants' claims 1 and 9 and have been discussed therein.

As to limitation of **claim 20**, the disclosure of Schock, Harke et al is incorporated herein by reference, the most subject matters of thermosetting composite material, filler material of glass particles having a size distribution from 0.2 to 1.5 mm, syrup of polymethyl methacrylate in methyl methacrylate from 25 to 30 wt% as currently claimed, have been recited in applicants' claim 1 and 5, and have been discussed therein.

(5). **Claims 13, 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schock (US005218013) in view of Harke et al (US005710204A), further in view of Traversa et al (US20010041234A1).

(6). The same rationale of rejection for **Claim 13** has been recited in prior Office Action dated May 22, 2006.

As to limitation of **claim 19**, Schock, Harke et al do not teach the mercaptosilane to silanize the filler.

However, Traversa et al (US20010041234A1) teach the mineral filler particles being advantageously coated with organofunctional silanes which form a covalent bond with the mineral filler and copolymerize with the monomer presented in the resin. It has been verified that it is possible to silanize the mineral fillers by means of mercaptosilanes, which form a covalent bond with the mineral filler but act as chain transfer agents in the polymerization process ([0049], line 1-8).

The advantage of using mercaptosilane is to reduce the molecular weight of the polymer and to allow obtaining a polymeric matrix which is more elastic and therefore less sensitive to impacts. In particular, excellent results are obtained by using 3-trimethoxysilylpropane-1-thiol ([0049], line 8-12).

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Therefore, it would have been obvious at time of the invention to use mercaptosilane of Traversa et al for the silanization process for the mineral fillers of Schock in order to obtain the above-mentioned advantage.

### ***Response to Arguments***

Applicant's arguments filed on September 22, 2006 have been fully considered but they are not persuasive.

(7). Applicants argue that prior art reference Schock (US005218013A) only discloses the mineral filler as quartz. In reviewing the teaching of Schock (US005218013A), it recites: well-suited as mineral filler particles are all minerals which are sufficiently hard; if one can do without the feature of the unbroken grain shape, ground granite or crushed gravel are, for example, also suitable (Col. 7, line 4-7). Schock (US005218013A) teaches the mineral filler as broad disclosure (Col. 1, line 12-13, Claim 1 - Schock). As to the PMMA in methyl methacrylate syrup from 25 to 30 wt% in the instant claim, Schock (US005218013A) discloses the PMMA in methyl methacrylate lying between 18 to 25 wt% (Col. 6, line 66).

Prior art reference Harke et al (US005710204A) disclose the inorganic fillers that can be used individually, or in combination, for example, glass (SiO<sub>2</sub>, metal oxide), quartz (crystal SiO<sub>2</sub>) for the plastic molded articles (Col. 4, line 23-28). Therefore, quartz, glass, glass beads are interchangeable fillers. Applicants assert that other than glass filler such as quartz, it would not absorb liquids and favor the germ and bacterial proliferation on the surface (Remarks filed on September 22, 2006). Applicants are suggested to provide unexpected results in regards to the use of glass filler in comparing with quartz fillers by running the consecutive back-to-back test by using closest prior art. Mere Counsel's arguments unsupported by factual evidence are given little weight. *In re Linden*, 457 F.2d 506, 508, 173 USPQ356, 358 (CCPA 1972).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

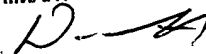
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Ives Wu

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Date: November 24, 2006

DUANE SMITH  
PRIMARY EXAMINER



11-27-06